

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :  
Yoshihiro UENO et al. : **Attn: APPLICATION BRANCH**  
Serial No. NEW : Docket No. 2001\_1708A  
Filed December 6, 2001 :  
**HEAD SLIDER AND DISK DRIVE  
APPARATUS USING THE SAME**

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**PRELIMINARY AMENDMENT TO REDUCE PTO FILING FEE**

Assistant Commissioner for Patents,  
Washington, DC 20231

Sir:

Please amend the above-identified application as follows.

**In the Claims:**

**Kindly amend claims 5-7 as follows.**

5. (Amended) The head slider according to claim 1, wherein said positive pressure generating section is formed of:

two side rails disposed at a predetermined distance from each of said disk inner edge side and said disk outer edge side so as to be extended from said air inlet end section to said air outlet end section; and

a cross rail having main portion thereof disposed at a predetermined distance from said air inlet end section and arranged perpendicularly to the air inflow direction and having both end portions thereof connected with said two side rails; wherein

said negative pressure generating recess is constituted of a portion of lower-leveled face surrounded by said positive pressure generating section and a flotation improving

face, which is formed, separately from said positive pressure generating section, in a central portion toward said air outlet end section.

6. (Amended) The head slider according to claim 1, wherein  
said sloped face is a planar face extended from end on air outlet side of said negative pressure generating recess to the air outlet end section and adapted such that distance from said disk, while said head slider is steadily afloat over said disk, becomes gradually larger toward the end thereof.

7. The head slider according to claim 1, wherein  
said sloped face is a curved face extended from end on air outlet side of said negative pressure generating recess to at least one of ends at said air outlet end section, said disk inner edge side, and said disk outer edge side and adapted such that distance thereof from said disk, while said head slider is steadily afloat over said disk, becomes continuously larger toward end thereof.

**Kindly add new claims 10-16 as follows.**

10. (New) The head slider according to claim 2, wherein said positive pressure generating section is formed of:

two side rails disposed at a predetermined distance from each of said disk inner edge side and said disk outer edge side so as to be extended from said air inlet end section to said air outlet end section; and

a cross rail having main portion thereof disposed at a predetermined distance from said air inlet end section and arranged perpendicularly to the air inflow direction and having both end portions thereof connected with said two side rails; wherein

said negative pressure generating recess is constituted of a portion of lower-leveled face surrounded by said positive pressure generating section and a flotation improving

face, which is formed, separately from said positive pressure generating section, in a central portion toward said air outlet end section.

11. (New) The head slider according to claim 3, wherein said positive pressure generating section is formed of:

two side rails disposed at a predetermined distance from each of said disk inner edge side and said disk outer edge side so as to be extended from said air inlet end section to said air outlet end section; and

a cross rail having main portion thereof disposed at a predetermined distance from said air inlet end section and arranged perpendicularly to the air inflow direction and having both end portions thereof connected with said two side rails; wherein

said negative pressure generating recess is constituted of a portion of lower-leveled face surrounded by said positive pressure generating section and a flotation improving face, which is formed, separately from said positive pressure generating section, in a central portion toward said air outlet end section.

12. (New) The head slider according to claim 4, wherein said positive pressure generating section is formed of:

two side rails disposed at a predetermined distance from each of said disk inner edge side and said disk outer edge side so as to be extended from said air inlet end section to said air outlet end section; and

a cross rail having main portion thereof disposed at a predetermined distance from said air inlet end section and arranged perpendicularly to the air inflow direction and having both end portions thereof connected with said two side rails; wherein

said negative pressure generating recess is constituted of a portion of lower-leveled face surrounded by said positive pressure generating section and a flotation improving face, which is formed, separately from said positive pressure generating section, in a central portion toward said air outlet end section.

13. (New) The head slider according to claim 3, wherein  
said sloped face is a planar face extended from end on air outlet side of said  
negative pressure generating recess to the air outlet end section and adapted such that distance  
from said disk, while said head slider is steadily afloat over said disk, becomes gradually larger  
toward the end thereof.

14. (New) The head slider according to claim 4, wherein  
said sloped face is a planar face extended from end on air outlet side of said  
negative pressure generating recess to the air outlet end section and adapted such that distance  
from said disk, while said head slider is steadily afloat over said disk, becomes gradually larger  
toward the end thereof.

15. (New) The head slider according to claim 3, wherein  
said sloped face is a curved face extended from end on air outlet side of said  
negative pressure generating recess to at least one of ends at said air outlet end section, said disk  
inner edge side, and said disk outer edge side and adapted such that distance thereof from said  
disk, while said head slider is steadily afloat over said disk, becomes continuously larger toward  
end thereof.

16. (New) The head slider according to claim 4, wherein  
said sloped face is a curved face extended from end on air outlet side of said  
negative pressure generating recess to at least one of ends at said air outlet end section, said disk  
inner edge side, and said disk outer edge side and adapted such that distance thereof from said  
disk, while said head slider is steadily afloat over said disk, becomes continuously larger toward  
end thereof.

**REMARKS**

The above claim amendments are presented in order to remove multiple claim dependencies, so as to reduce the required filing fee.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached version is captioned "**Version with markings to show changes made.**"

Respectfully submitted,

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slider is steadily afloat over said recording medium, becomes gradually larger toward the end thereof.

4. The head slider according to claim 2, wherein said front surface includes:

5                   a first air-bearing face; and  
                  a second air-bearing face, wherein said first air-bearing face includes:

                          a positive pressure generating section;  
                          a negative pressure generating recess;

10    and

                          a head disposed at said air outlet end section for performing at least one of recording and playing back on said disk-formed recording medium; and said second air-bearing face is formed of

15                   a sloped face extended from end on air outlet side of said negative pressure generating recess to at least one of ends at said air outlet end section, said disk inner edge side, and said disk outer edge side and arranged such that distance thereof from said disk-formed recording medium, while said head  
20 slider is steadily afloat over said recording medium, becomes gradually larger toward the end thereof.

5. The head slider according to ~~any of claim 1 to~~  
~~claim 4~~, wherein said positive pressure generating section is formed of:

25                   two side rails disposed at a predetermined distance from each of said disk inner edge side and said disk outer edge side so as to be extended from said air inlet end section to said air outlet end

section; and

a cross rail having main portion thereof disposed at a predetermined distance from said air inlet end section and arranged perpendicularly to the air inflow direction and having both end portions thereof connected with said two side rails; wherein

said negative pressure generating recess is constituted of a portion of lower-leveled face surrounded by said positive pressure generating section and a flotation improving face, which is formed, separately from said positive pressure generating section, in a central portion toward said air outlet end section.

6. The head slider according to ~~any of claim 1, claim 3, and claim 4;~~ wherein

said sloped face is a planar face extended from end on air outlet side of said negative pressure generating recess to the air outlet end section and adapted such that distance from said disk, while said head slider is steadily afloat over said disk, becomes gradually larger toward the end thereof.

7. The head slider according to ~~any of claim 1, claim 3, and claim 4;~~ wherein

said sloped face is a curved face extended from end on air outlet side of said negative pressure generating recess to at least one of ends at said air outlet end section, said disk inner edge side, and said disk outer edge side and adapted such that distance thereof from said disk, while said head slider is steadily afloat over said disk, becomes continuously larger toward end thereof.

8. A disk drive comprising: